SITE INSPECTION REPORT
MARCH POINT LANDFILL
ANACORTES, WASHINGTON

MARCH, 1986

HAZARDOUS WASTE CLEANUP PROGRAM

PRELIMINARY ASSESSMENT/SITE INSPECTION SECTION

State of Washington
Booth Gardner
Governor

Department of Ecology

PREPARED BY SUZANNE E. MILHAM

S. I.

EPA POTENTIAL HAZARDOUS WASTE SITE DISPOSITION

REGION	SITE NUMBER
10	WAD980638944

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
SKAGIT CO. MARCH POINT LANDFILL	NORTH OF HIGHWAY 20 - MARCH POINT	
C. CITY	**D. STATE**	**E. ZIP CODE**
ANACORTES	WA	98221

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED -- ~~NO HAZARD~~ by CERCLA	X				
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*					
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION NEEDED *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR DISPOSITION / SOURCES OF INFORMATION

THE SITE WAS USED AS A PUBLIC DUMP FROM THE 1950's TO 1973. AS THE SITE IS A FILLED IN AREA WITHIN THE TIDELANDS OF PADILLA BAY, ~~CONTAMINAT~~ POSSIBLE CONTAMINATION OF GROUNDWATER IS NOT A HUMAN HEALTH CONCERN. THERE ARE 4 MAJOR CHEMICAL & OIL INDUSTRIES LOCATED IN THE AREA. SAMPLING OF A LEACHATE/SEEPAGE STREAM AT THE TOE OF THE FILL DID NOT REVEAL PRIORITY POLLUTANT CONTAMINATION OTHER THAN IN TRACE AMOUNTS. SAMPLING OF OFFSHORE SEDIMENTS DID NOT REVEAL ANY CONTAMINATION OTHER THAN LOW LEVELS OF TOLUENE & FLUORANTHENE WHICH WERE NOT DETECTED IN LEACHATE.
BRL:B6

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*	G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
ROBERT KIEVIT	(206) 753-9014	3-2686

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

B. PROPOSED INVESTIGATIVE ACTIVITY *(Detailed Information)*

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION *(mo, day, & yr)*	3. TO BE PERFORMED BY *(EPA, Contractor, State, etc.)*	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION (1)				
(2)				
(3)				
b. TYPE OF MONITORING (1)				
(2)				
c. TYPE OF SAMPLING (1)				
(2)				

EPA Form T2070-4 (10-79)

Continue On Reverse

Continued From Front

III. INVESTIGATIVE ACTIVITY NEEDED and PART B - PROPOSED INVESTIGATIVE ACTIVITY (Continued)

d. TYPE OF LAB ANALYSIS (1)				
(2)				
e. OTHER (specify) (1)				
(2)				

C. ELASORATE ON ANY OF THE INFORMATION PROVIDED IN PART B (on front & above) AS NEEDED TO IDENTIFY ADDITIONAL INVESTIGATIVE WORK.

D. ESTIMATED MANHOURS BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES	1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES
a. EPA		b. STATE	
c. EPA CONTRACTOR		d. OTHER (specify)	

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY STRATEGY (On Site & Off-Site): List all emergency actions needed to bring site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the space below.

1. ACTION	2. EST. START DATE (mo, day, & yr)	3. EST. END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY (On Site & Off-Site): List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. EST. START DATE (mo, day, & yr)	3. EST. END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State Private Party)	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
				$	
				$	
				$	
				$	
				$	
				$	

C. ESTIMATED MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES	1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES
a. EPA			b. STATE		
c. PRIVATE PARTIES			d. OTHER (specify)		

SITE INSPECTION REPORT

SKAGIT COUNTY - MARCH POINT LANDFILL
ANACORTES, WASHINGTON

WAD980638944

Report Prepared by:

Suzanne E. Milham
Washington State Department of Ecology
Preliminary Assessment/Site Inspection Section
Hazardous Waste Cleanup Program

March 1986

SITE NAME/LOCATION

Skagit County March Point Landfill, WAD980638944, north of Highway 20, 500 feet east of March Point Road, Anacortes, Washington.

Northeast 1/4, Section 3, Township 34 north, Range 2 east, Willamette Meridian.

Latitude: 48/30/06.0; Longitude: 122/36/360

INVESTIGATION PARTICIPANTS

Suzanne E. Milham	Washington State Department of Ecology Hazardous Waste Cleanup Program (206) 459-6319
Ned C. Therien	Washington State Department of Ecology Hazardous Waste Cleanup Program (no longer working for Ecology)

PRINCIPAL SITE CONTACTS

Jay Andrews	Washington State Department of Natural Resources (206) 753-5327
Skagit County Public Works	(206) 336-9400

DATE OF INVESTIGATION AND SAMPLING

December 11, 1985

INTRODUCTION

The Skagit County, March Point Landfill (hereinafter called the landfill) has been identified from preliminary assessment screening as requiring further investigations by the U.S. Environmental Protection Agency (EPA) Region X and the Washington State Department of Ecology (Ecology). This site was scheduled for an inspection to gather additional information to accurately profile the nature and extent of past waste disposal activity. This site inspection was carried out under the Superfund Multi-Site Cooperative Agreement, Preliminary Assessment/Site Inspection (PA/SI) program. This report summarizes the results of this inspection.

TABLE OF CONTENTS

1.0 SITE OWNER/OPERATOR

The Skagit County March Point Landfill is owned by the Washington State Department of Natural Resources. It was used from the 1950's as an uncontrolled public dump,and was operated by the Skagit County Public Works Department from 1961-1973.

2.0 SITE HISTORY AND BACKGROUND

The site was used from the 1950's until 1973 as a public dump. It is unknown what waste types and quantities other than municipal wastes were buried there. There are four major chemical and oil industries located on March Point. These industries have been in operation as long as the landfill has been in existence. The Texaco Company is known to have dumped unknown substances at this landfill. Because this landfill was unregulated for ten years and not strictly regulated for the years after that, it is suspected that industrial waste may have been disposed of there.

3.0 ENVIRONMENTAL SETTING

The landfill is located in a rural area with industrial development to the north and west. The Shell and Texaco refineries, Allied Chemical Sulfuric Acid Plant and Northwest Petrochemical Company are all located on March Point within two miles. The landfill is located at the base of a bluff in the tidelands area of Padilla Bay. The landfill has been covered with 2-3 feet of soil and has revegetated naturally with alders and grass. There is a dike built on the seaward north side and leachate can be seen flowing out of the landfill there. The site is bounded by Highway 20 on the south side. There is a small stream which runs along the southwest side of the landfill. The Swinomish Indian Reservation bounds the site on the east side.

3.1 Climate

The climate of Anacortes is somewhat moderated by its proximity to the waters of Puget Sound. The mean annual precipitation for the Anacortes area is approximately 27 inches. The maximum 2-year, 24 hour rainfall is approximately 2 inches. In August 1984, the daily maximum temperature was approximately 84°F and in December 1984, the lowest average temperature was 18°F.

3.2 Geology and Hydrology

This site is a filled-in area at the bottom of a bluff which lies in the tidelands of Padilla Bay. Soils are exposed glacial outwash consisting of highly permeable sands and gravels. This gravel bearing strata can be clearly seen in the barrow pit approximately 40 feet to the southwest at the Concrete N.W. Company. Shallow groundwater can also be seen in this barrow pit and is estimated to be at a depth of 10 feet.

A well log from the USGS well located 2,500 feet upgradient to the south indicates a deeper aquifer located at 75-80 feet deep. There is tidal incursion to the landfill along Padilla Bay which mixes with leachates at high tide, the mean range of the tide is 1.6 meters.

3.3 Topography and Drainage

The landfill lies in the tidelands of Padilla Bay on the southwest side of March Point at approximately 100 foot elevation. There is a marked rise in elevation inland to the south. At a distance of 6000 feet the elevation rises to 240 feet. Drainage flows down this slope towards Padilla Bay and the landfill. The landfill itself lies in a flat area which also drains to the Bay.

3.4 Groundwater and Surface Water Uses

The nearest well is 2,500 feet upgradient to the south and is owned by the USGS. There are two Skagit County Public Utilities District secondary wells within one mile upgradient and to the west. Approximately 10,000 people in a 4 mile radius utilize groundwater for drinking. Groundwater flows towards Padilla Bay in a northerly direction.

There is a small stream which runs along the southeast side of the landfill. There is no known use of this stream for recreation or drinking water. This stream is of a blackish nature being influenced by tidal incursion from Padilla Bay. Padilla Bay is used for fishing, recreation and is a National Estuary Reserve.

4.0 METHODS

The inspection began at 11:00 a.m. on December 10, 1985. The weather was sunny and 35°F; there was ice on the water and the ground was frozen. We met with Ken Willis of the Skagit County Health Department at the landfill and proceeded to tour the site and discuss its parameters and history.

Ken related how the landfill was not very well regulated and that a private citizen lived there who had a contract with the county for salvage rights but didn't regulate waste or collect fees. Ken said that he remembered one instance in which vanadium catalysts in a powdered form were dumped at the landfill. Ken also said that this site was originally a burning dump. He estimated that there was 2-3 feet of clean cover dirt over the wastes which had been buried.

A preliminary site sampling plan was developed prior to going on-site and is contained in Appendix D. After walking over the site and discussing its history, sampling locations were determined. The locations and methods of the sampling plan are described in the following text.

Water sample NCT091 was taken from the barrow pit across the street 40 feet to the southwest of the landfill. Permission was obtained from the property owners, the NW Concrete Company, for site access. The water in this pit is believed to be representative of upgradient groundwater. There was a layer of ice approximately one inch thick on the surface of the water. A hole was present in the ice which had been caused by cracking and shifting. A glass sample jar was placed in a holster of fishing line and then cast and dipped in the water of the barrow pit through the crack in the ice. Water was bailed in this manner until all sample bottles had been adequately filled.

Water sample NCT092 was taken from an estuarial stream on the southeast edge of the landfill. There was also ice in this location which was broken using a shovel. Samples were collected by dipping jars in the water.

Sample NCT093 was also taken from the sediments at this location. The sediments consisted of 3 inches of black smelly organic matter underlain by grey clay. Sediments were collected using a stainless steel trier with a 1" wide tube on the end. Sediments were not frozen. The pH of this stream was sampled with pH paper and appeared close to 7.

Sample NCT094 was taken from the nearshore Padilla Bay waters at high tide on the northeast side of the landfill. There was an apparent oily film on the water, and there was no ice present on the waters of the bay.

Sample NCT095 was taken of leachate/seepage coming through the dike along Padilla Bay on the northeast side of the landfill. A duplicate was made of this sample.

Sample NCT096 was taken from the nearshore marine sediments in this same location on the northeast side of the landfill. There was an apparent orange, rust-like top layer present along the shoreline sediments. There was also assorted rubble which could be seen under water offshore.

5.0 ANALYTICAL PARAMETERS

Water samples NCT091, NCT092, NCT094, NCT095 were analyzed by Lauck's Laboratory for volatile organics and EPA priority pollutants. Sample NCT095 was duplicated and sent blind to the lab as was a laboratory prepared transport blank. These samples were also analyzed for dissolved priority pollutant metals and total phenols by the Manchester Environmental Laboratory.

Sediment samples NCT093 and NCT096 were analyzed at Lauck's Laboratory for priority pollutant acid base neutral organics and purgeable volatile organics (VOAs).

5.1 Quality Control/Quality Assurance of Sample Collection

Stringent quality control and assurance procedures for sample collection were developed in conjunction with the EPA Site Inspection Sampling Guidelines, and training course literature. These procedures are also discussed in detail in the sampling and safety plans which were developed for this site prior to performing the actual inspection (see Appendices D and E). Procedures for documentation, chain of custody, decontamination of samples and personnel, safety, and labeling are included in these plans.

Blind duplicates were made from one sample for each parameter analyzed. The laboratory was not notified which samples were the duplicates. Transfer and transport blanks were prepared by the laboratory and maintained a analyzed for each parameter sampled.

5.2 Laboratory and Data Quality Control/Quality Assurance

The laboratories which performed the sample analysis practiced strict quality control and assurance per EPA standards.

Lauck's Laboratory supplied a surrogate recovery report contained in Appendix A. Surrogate (chemically similar) compounds were utilized in the analysis of volatile organics. Surrogates were added to each sample prior to extraction and analysis to monitor for matrix effects, purging efficiency and sample processing errors. The control limits used by Lauck's represent the 95 percent confidence interval established by their laboratory through repetitive analysis of these sample types.

The Manchester Laboratory used similar quality control and assurance procedures.

All laboratory sample analyses results were reviewed for consistency and accuracy by each member of the PA/SI team and at least one organic chemist before inclusion to this report.

6.0 RESULTS AND DISCUSSION

Phenolics

The results of the phenols analysis showed no contamination in any of the samples analyzed, when compared to the background sample taken from the barrow pit.

Metals

There were slight elevations of zinc and nickel in the offshore marine water sample and estuary stream water sample NCT092 and NCT094, respectively, when compared to the background fresh water sample taken from the barrow pit. These elevations are due to the marine nature of these samples and the natural constituents of sea water. There were also slight elevation of arsenic, selenium and telurium in water sample NCT094 taken from nearshore in Padilla Bay.

These slightly increased levels are also believed to be due to the marine nature of these samples. These levels are slightly above the national primary drinking water standards which have been set for fresh water.

Arsenic was found at 126 ppb in the estuary stream sediments sample NCT096. A concentration of this amount is not excessive when found in soils although it is greater than the amount found in the offshore sediment samples (1 ppb). Ten times the national primary drinking water standard level for arsenic would be 500 parts per billion. This is the amount which has been used to determine limits for soil contamination by Ecology.

Overall, the quantities of metals found in the samples do not represent hazardous elevations.

Volatile Organics

Acetone was found in both sediment samples NCT093 and NCT096 at 570 and 1100 ppb, respectively. Methylene chloride was also found in these samples at 581 and 3200 ppb, respectively. Acetone and methylene chloride are common laboratory contaminants. Since there were traces of both compounds found in the transport blanks, it can be assumed that the contamination originated from the laboratory. Slight amounts of toluene, 51 ppb and fluoranthene 50 ppb were found in the nearshore sediment sample NCT096. These compounds were not found in the transport blank or any other sample and may likely have come from the landfill or from spills of fuel or other sources along Padilla Bay.

Acid Base Neutral Extractables

There were no acid base neutral extractable compounds detected in any of the samples analyzed.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Because of the slight amounts of contamination detected and the inconsistency of contaminant presence in the samples, It can't be determined if this slight contamination has resulted directly from the landfill contents or other non-point sources in the area (such as fuel spills).

The presence of flouranthene and toluene are not unexpected in the offshore marine sediment samples for such a highly industrialized area. If this contamination had been detected in the leachate samples, contamination could have been directly linked to the landfill contents.

The sampling data do not show a significant problem at this landfill to warrant further sampling or remedial actions. There is no conclusive indication that hazardous materials are leaching from this landfill into Padilla Bay or its surrounding estuarial area. It is recommended that no further hazardous waste sampling or remedial actions be required at this site.

8.0 REFERENCES

1) Texaco, in an EPA 103(c) notification calls this site their "off-site number 2" disposal site.

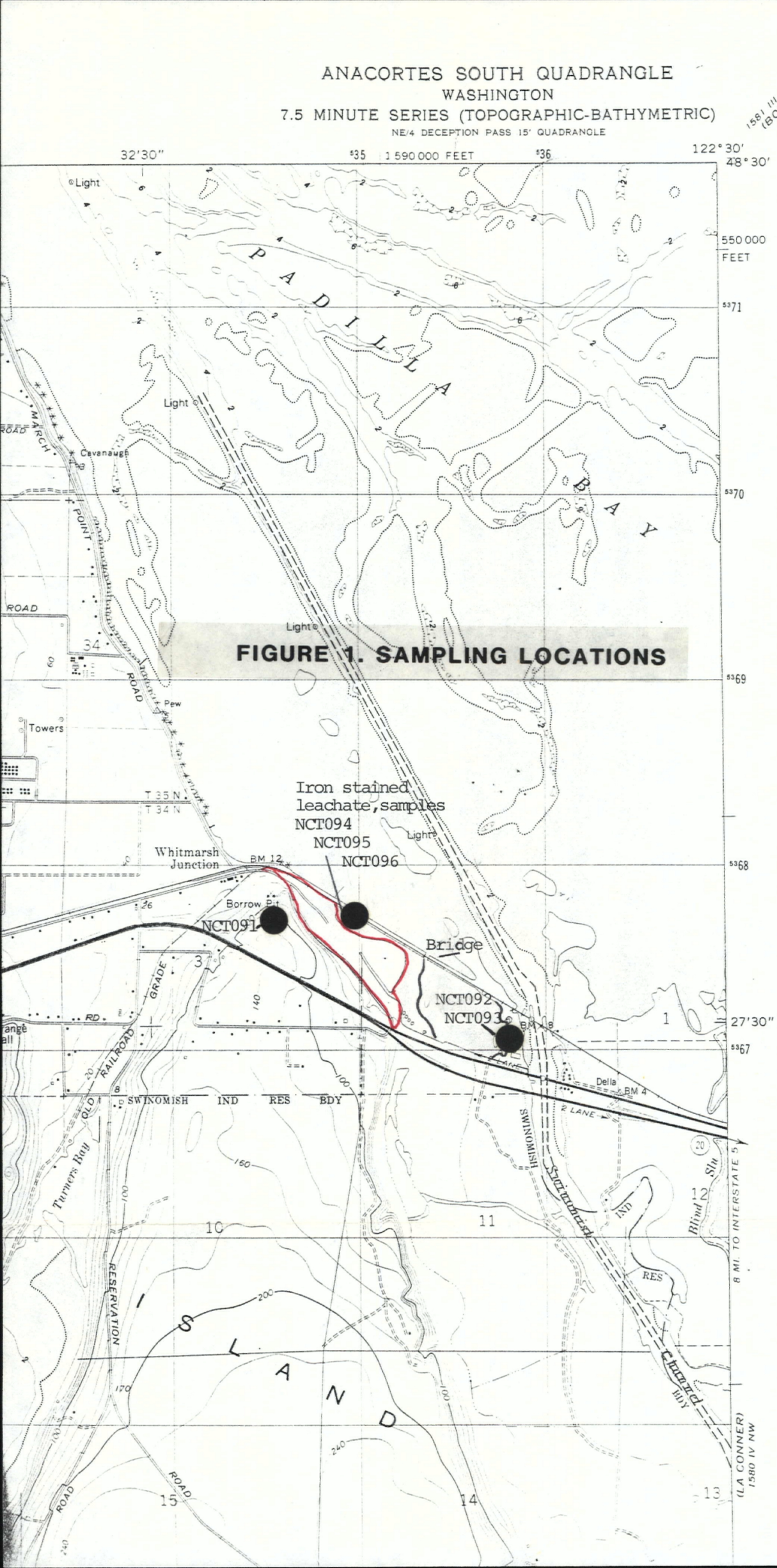
2) Climatological Data Annual Summary, Washington 1984. Vol 88, #31, National Oceanic Atmospheric Administration.

3) Anacortes, Washington, NE/4 Deception pass 15' quadrangle 1978.

4) US EPA 1984 Preliminary Assessment of March Point Landfill, Anacortes, Washington.

FIGURES AND TABLES

9.0 FIGURES AND TABLES


ANACORTES SOUTH QUADRANGLE
WASHINGTON
7.5 MINUTE SERIES (TOPOGRAPHIC-BATHYMETRIC)
NE/4 DECEPTION PASS 15' QUADRANGLE
1581 III SW (BOW)
32'30"
1 590 000 FEET
122°30'
48°30'
550 000 FEET
PADILLA BAY
MARCH POINT
Cevanaugh
Light
Towers
Pew
ROAD
RAILROAD GRADE
Whitmarsh Junction
BM 12
Borrow Pit
T 35 N
T 34 N
Iron stained leachate, samples
NCT094
NCT095
NCT096
NCT091
NCT092
NCT093
Bridge
BM 18
BM 4
Della
SWINOMISH IND RES BDY
Turners Bay
QLD
RESERVATION
ISLAND
Swinomish Channel
Blind Slough
IND
RES
8 MI. TO INTERSTATE 5
(LA CONNER) 1580 IV NW
FIGURE 1. SAMPLING LOCATIONS
CONVERSION SCALES
Feet
Meters

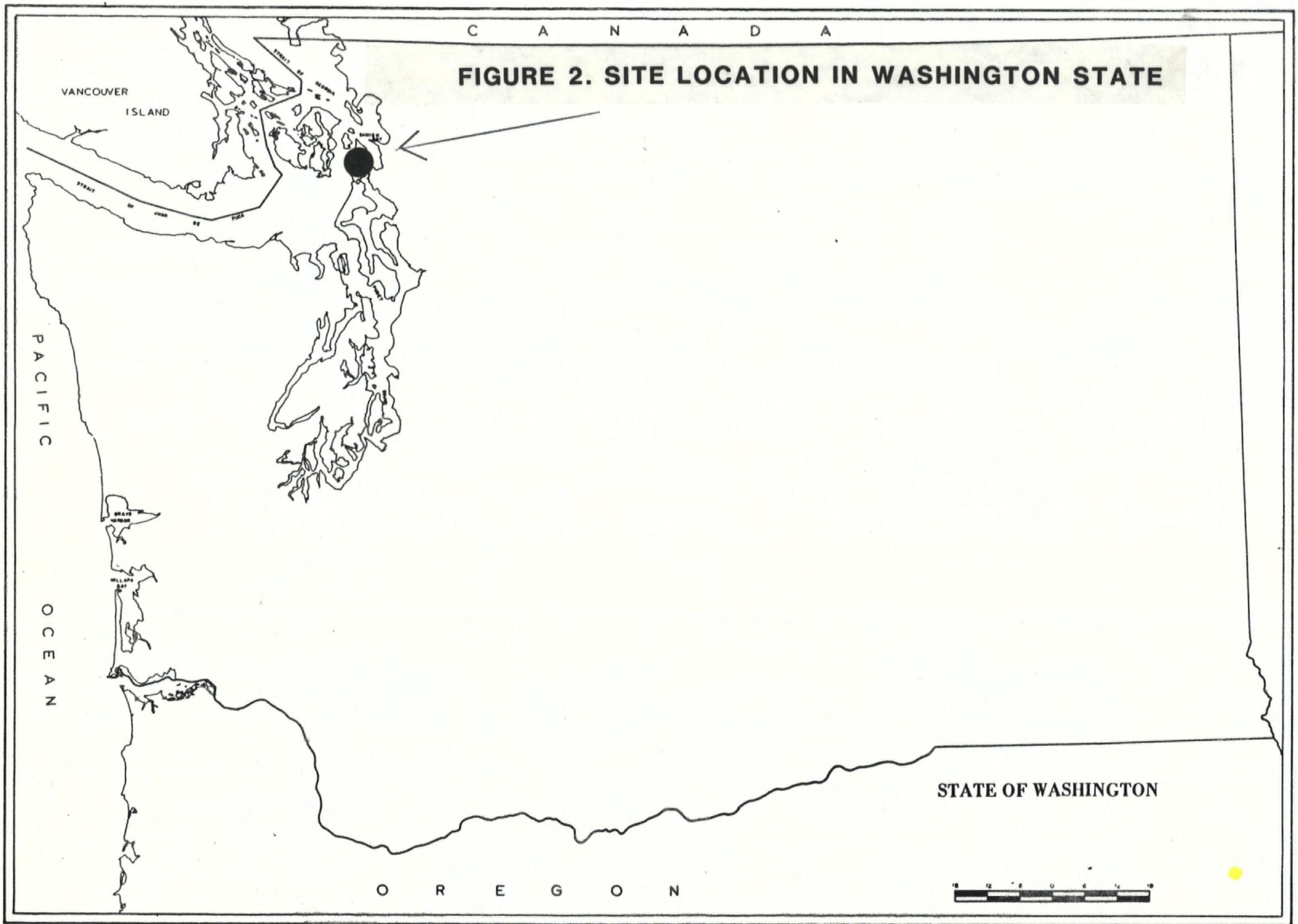


FIGURE 2. SITE LOCATION IN WASHINGTON STATE

APPENDIX A

APPENDIX A

Sample Analysis Results/Correspondence/Historical Data

State of Washington Department of Ecology

FIELD SAMPLE DATA AND CHAIN OF CUSTODY SHEET

Project Code: 868 Account: _____

Name/Location: March Point Landfill, Skagit County

Project Officer: Ned Therien (206) 459-6352

☒ Enforcement/Custody
☐ Possible Toxic/Hazardous
☐ Data Confidential
☐ Data for Storet

Notes: Please analyze for Priority Pollutant Acid, Base, Neutral Organics and for Purgeable Organics (VOA)

Samplers: Ned Therien, Suzanne M. Thomas

Recorder: Ned C. Therien (Signatures Required)

SOURCE CODE	MATRIX: Water	Sediment	Tissue	Oil	#CONTAINERS & PRESERV.: Unpress	H_2SO_4	HNO_3	LAB NUMBER: Yr	Wk	Seq	STATION NUMBER	DATE: Yr	Mo	Dy	Time	COMPOSITE ONLY: ENDING DATE Mo	Dy	Time	Type	Freq	STATION DESCRIPTION
40		X			2						NCT0913	85	12	11							sediment from bottom of estuarine/stream at sidedge of site
40		X			2						NCT0916	85	12	11							sediment from nearshore of estuary, east of landfill

LAB NUMBER: Yr	Wk	Seq	DEPTH	Units	Type	COL MTD CD	QA CODE	TEMP DEG C	pH	CNDCTVTY umho/cm	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Ned C. Therien	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	REC'V'D BY MOBILE LAB FOR FIELD ANAL.: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy White — Project Officer Copy Yellow — Field or Office Copy Pink

ECY 040-115

State of Washington Department of Ecology

FIELD SAMPLE DATA AND CHAIN OF CUSTODY SHEET

☒ Enforcement/Custody
☐ Possible Toxic/Hazardous
☐ Data Confidential
☐ Data for Storet

Project Code: 868 Account:
Name/Location: March Point Landfill Skagit County
Project Officer: Ned Therien (206) 459-6352

Notes: Volatile organic Priority Pollutant Analysis

Samplers: Ned Therien, Suzanne Milham
Recorder: Ned C. Therien (Signatures Required)

SOURCE CODE	MATRIX: Water	Sediment	Tissue	Oil	#CONTAINERS & PRESERV.: Unpress	H_2SO_4	HNO_3	LAB NUMBER: Yr	Wk	Seq	STATION NUMBER	DATE: Yr	Mo	Dy	Time	COMPOSITE ONLY: ENDING DATE Mo	Dy	Time	Type	Freq	STATION DESCRIPTION
17	X				2						NCT091	85	12	11							borrow pit ground/surface runoff water west of landfill
17	X				2						NCT092	85	12	11							water from estuarial stream at SW edge of landfill
14	X				2						NCT094	85	12	11							water from nearshore of estuary east of landfill
38	X				2						NCT095	85	12	11							water from seepage/leachate into estuary east of landfill
16	X				2						TRANSP BLANK	85	12	11							Transport blank

LAB NUMBER: Yr	Wk	Seq	DEPTH	Units	Type	COL MTD CD	QA CODE	TEMP DEG C	pH	CNDCTVTY umho/cm	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Ned C. Therien	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	REC'V'D BY MOBILE LAB FOR FIELD ANAL.: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy White — Project Officer Copy Yellow — Field or Office Copy Pink

ECY 040-115

State of Washington Department of Ecology

FIELD SAMPLE DATA AND CHAIN OF CUSTODY SHEET

Project Code: 368 Account: ______

Name/Location: March Point Landfill, Skagit County

Project Officer: Ned Thereon SCAW 585-6352

☒ Enforcement/Custody
☐ Possible Toxic/Hazardous
☐ Data Confidential
☐ Data for Storet

Notes: Please analyze for ... priority pollutant heavy metals (plus [illegible]) and for Phenols

Samplers: [illegible]
[illegible]

Recorder: [illegible]
(Signatures Required)

SOURCE CODE	MATRIX: Water	Sediment	Tissue	Oil	#CONTAINERS & PRESERV.: Unpress	H_2SO_4	HNO_3	LAB NUMBER: Yr	Wk	Seq	STATION NUMBER	DATE: Yr	Mo	Dy	Time	COMPOSITE ONLY — ENDING DATE: Mo	Dy	Time	Type	Freq	STATION DESCRIPTION
11	[illegible]				1	1					NCT091	85	12	11							borrow pit ground/surface runoff water west of landfill
11	[illegible]				1	1					NCT092	85	12	11							water from estuarial stream at SW edge of landfill
11	[illegible]				1	1					NCT094	85	12	11							water from nearshore of estuary [illegible]
32	[illegible]				1	1					NCT095	85	12	11							water from seep [illegible]

LAB NUMBER: Yr	Wk	Seq	DEPTH	Units	Type	COL MTD CD	QA CODE	TEMP DEG C	pH	CNDCTVTY umho/cm	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
[illegible]	[illegible]	
[illegible]	[illegible]	

RELINQUISHED BY: (Signature) — REC'V'D BY MOBILE LAB FOR FIELD ANAL.: (Signature) — DATE/TIME

DISPATCHED BY: (Signature) — DATE/TIME — RECEIVED FOR LAB BY: (Signature) — DATE/TIME

METHOD OF SHIPMENT

Laboratory Copy White — Project Officer Copy Yellow — Field or Office Copy Pink

ECY 040-115

State of Washington
Department of Ecology

FIELD SAMPLE DATA AND CHAIN OF CUSTODY SHEET

☒ Enforcement/Custody
☐ Possible Toxic/Hazardous
☐ Data Confidential
☐ Data for Storet

Project Code: 868 Account: ______

Name/Location: March Point Landfill, Skagit County

Project Officer: Ned Therien SCAN 585-6352

Notes: Please analyze for E-P Toxicity, Metals Concentrations

Samplers: Ned Therien
Suzanne Milham

Recorder: Ned C. Therien
(Signatures Required)

SOURCE CODE	MATRIX: Water	MATRIX: Sediment	MATRIX: Tissue	MATRIX: Oil	#CONTAINERS & PRESERV.: Unpress	H_2SO_4	HNO_3	LAB NUMBER: Yr	Wk	Seq	STATION NUMBER	DATE: Yr	Mo	Dy	Time	COMPOSITE ONLY ENDING DATE: Mo	Dy	Time	Type	Freq	STATION DESCRIPTION
40		x			1						NCT093	85	12	11							sediment from bottom of estuarial stream at SW edge of [illegible]
40		x			1						NCT096	85	12	11							sediment from nearshore of estuary east of landfill

LAB NUMBER: Yr	Wk	Seq	DEPTH	Units	Type	COL MTD CD	QA CODE	TEMP DEG C	pH	CNDCTVTY umho/cm	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
Ned C. Therien	[illegible] Milham	
[illegible] Milham	[illegible]	

RELINQUISHED BY: (Signature)	REC'V'D BY MOBILE LAB FOR FIELD ANAL.: (Signature)	DATE/TIME

DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME

METHOD OF SHIPMENT

ECY 040-115

Laboratory Copy White · Project Officer Copy Yellow · Field or Office Copy Pink

ORIGINAL TO: LAB FILES
COPIES TO: ~~Ned Therien~~
Suzanne Milhem

State of Washington Department of Ecology

ENVIRONMENTAL LABORATORY DATA SUMMARY METALS

SOURCE March Point Landfill PROGRAM NUMBER 868

DATE COLLECTED 11-22-85 RECEIVED 12-17-85 COLLECTED BY Ned Therien

Sample (Log) Number	Units	Standard Deviation ± %	51 7129	51 7130	51 7131	51 7132				
Station:			NCT 091	NCT 092	NCT 094	NCT 095				
Cu Dissolved	µg/L		7	11	2	1				
Zn Dissolved	µg/L		<1	32	3	22				
Fe										
Ni Dissolved	µg/L		5	100	40	6				
Cr Dissolved	µg/L		<1	<1	<1	<1				
Cd Dissolved	µg/L		<0.2	<0.2	<0.2	<0.2				
Pb Dissolved	µg/L		<1	<1	<1	<1				
Mn										
Sb Dissolved	µg/L		<1	<1	<1	<1				
Be Dissolved	µg/L		<0.1	<0.1	14.2	<0.1				

NOTE: Dissolved Metals: Those that will pass through a 0.45 µ membrane filter
Suspended Metals: Those retained by a 0.45 µ membrane filter
Total Metals: Those found in the unfiltered, rigorously acid digested sample
mg/L = ppm = µg/ml
µg/L = ppb = ng/ml
mg/kg = ppm = µg/gm
µg/kg = ppb = ng/gm
"<" is "less than" and ">" is "greater than"

SUMMARIZED BY R. J. Carden DATE 3/18/86

REVIEWED BY Pam Covey DATE 3/18/86

ECY 040-2-32 (a)
Rev. 8/81

State of Washington
Department of Ecology

ENVIRONMENTAL LABORATORY
DATA SUMMARY
METALS

ORIGINAL TO: LAB FILES
COPIES TO: ~~Ned Therien~~

SOURCE March Point Landfill PROGRAM NUMBER 868

DATE COLLECTED 11-22-85 RECEIVED 12-17-85 COLLECTED BY Ned Therien

Sample (Log) Number	Units	Standard Deviation ± %	51 7129	51 7130	51 7131	51 7132					
Station:			NCT 091	NCT 092	NCT 094	NCT 095					
(Hg) Dissolved	µg/L		0.06	0.06	<0.06	<0.06					
(As) Dissolved	µg/L		5	<1	74	2					
(Se) Dissolved	µg/L		2	<1	62	5					
Ba											
(Ag) Dissolved	µg/L		<0.1	<0.1	<0.1	<0.1					
Na											
K											
Ca											
(Tl) Dissolved	µg/L		1	<1	24	3					

NOTE: Dissolved Metals: Those that will pass through a 0.45 µ membrane filter
Suspended Metals: Those retained by a 0.45 µ membrane filter
Total Metals: Those found in the unfiltered, rigorously acid digested sample
mg/L= ppm = µg/ml
mg/kg = ppm = µg/gm
µg/L= ppb = ng/ml
µg/kg = ppb = ng/gm

"<" is "less than" and ">" is "greater than"

SUMMARIZED BY [signature] DATE 3/18/86

REVIEWED BY Pam Covey DATE 3/18/86

ECY 040-2-32 (c)
Rev. 8/81

State of Washington
Department of Ecology

ENVIRONMENTAL LABORATORY DATA SUMMARY METALS

ORIGINAL TO: LAB FILES

COPIES TO: Ned Therien

SOURCE March Point Landfill PROGRAM NUMBER 868

DATE COLLECTED 11-22-85 RECEIVED 12-17-85 COLLECTED BY Ned Therien

Sample (Log) Number	Units	Standard Deviation ± %	51 7133	51 7134						
Station:			NCT 093	NCT 096						
Cu										
Zn										
Fe										
Ni										
(Cr) EP Tox	µg/L		<1	<1						
(Cd) EP Tox	µg/L		0.9	0.4						
(Pb) EP Tox	µg/L		<1	2						
Mn										

NOTE: Dissolved Metals: Those that will pass through a 0.45 µ membrane filter
Suspended Metals: Those retained by a 0.45 µ membrane filter
Total Metals: Those found in the unfiltered, rigorously acid digested sample
mg/L= ppm = µg/ml
µg/L= ppb = ng/ml
mg/kg = ppm - µg/gm
µg/kg = ppb = ng/gm
"<" is "less than" and ">" is "greater than"

SUMMARIZED BY [signature] DATE 3/18/86

REVIEWED BY [signature] DATE 3/18/86

ECY 040-2-32 (a)
Rev. 8/81

State of Washington Department of Ecology

ORIGINAL TO: LAB FILES

COPIES TO: Ned Therien

ENVIRONMENTAL LABORATORY DATA SUMMARY METALS

SOURCE March Point Landfill PROGRAM NUMBER 868

DATE COLLECTED 11-22-85 RECEIVED 12-17-85 COLLECTED BY Ned Therien

Sample (Log) Number	Units	Standard Deviation ± %	51 7133	51 7134							
Station:			NCT 093	NCT 096							
Hg EP Tox	µg/L		0.06	0.06							
As EP Tox	µg/L		126	<1							
Se EP Tox	µg/L		6	4							
Ba EP Tox	µg/L		100	910							
Ag EP Tox	µg/L		<0.1	<0.1							
Na											
K											
Ca											

NOTE: Dissolved Metals: Those that will pass through a 0.45 µ membrane filter
Suspended Metals: Those retained by a 0.45 µ membrane filter
Total Metals: Those found in the unfiltered, rigorously acid digested sample
mg/L = ppm = µg/ml
mg/kg = ppm = µg/gm
µg/L = ppb = ng/ml
µg/kg = ppb = ng/gm

"<" is "less than" and ">" is "greater than"

SUMMARIZED BY [signature] DATE 3/18/86

REVIEWED BY [signature] DATE 3/18/86

ECY 040-2-32 (c)
Rev. 8/81

P6

State of Washington Department of Ecology

OLYMPIA ENVIRONMENTAL LABORATORY

DATA SUMMARY

ORIGINAL TO: LAB FILES

COPIES TO: ~~Ned Therien~~ Suzanne Milham

SOURCE Skagit Co.-March Pt. Landfill

DATE COLLECTED 12/11/85 COLLECTED BY Ned Therien

Sample (Log) Number 51	7129	7130	7131	7132						
Station:	NCT 091	NCT 092	NCT 094	NCT 095						
pH (units)										
Turbidity (NTU)										
Sp. Conductivity (umhos/cm)										
COD										
BOD (5 day)										
Fecal Coliform (Col./100 ml)										
NO3-N										
NO2-N										
NH3-N										
T.Kjeldahl-N										
O-P04-P										
Total Phos.-P										
Total Solids										
Total Non Vol. Solids										
Total Suspended Solids										
Total Non Vol. Sus. Solids										
Phenolics	.030	.005	.010	.020						
Metals will be reported separately										

NOTE: All results are in mg/L(ppm) unless otherwise specified. ND is "None Detected"
"<" is "Less Than" and ">" is "Greater Than"

SUMMARIZED BY Pam Covey DATE 1/7/86

REVIEWED BY RO Thomas DATE 1/8/86

RDT

ECY 040-2-32
Rev. 9/81

Laucks Testing Laboratories, Inc.

940 South Harney Street. Seattle. Washington 98108 (206) 767-5060

Chemistry. Microbiology. and Technical Services

Invoice

Washington State Dept. of Ecology
Manchester Laboratory
P.O. Box 346
Manchester, WA 98353

INVOICE NO. 94389

DATE February 7, 1986

ORDER NO. F000972

TO PROFESSIONAL SERVICES

Skagit County March pt

For Analysis of WATER/SOIL $2,630.00

Net 30 Days

The liability of these laboratories for the services covered by this invoice shall in no event exceed the amount of this invoice.
Sample discarded after analysis unless otherwise requested.

Laucks
Testing Laboratories, Inc.
940 South Harney St., Seattle, Washington 98108 (206)767-5060

Certificate

Chemistry, Microbiology, and Technical Services

CLIENT: Washington State Dept. of Ecology
Manchester Laboratory
P.O. Box 346
Manchester, WA 98353

LABORATORY NO. 94389

DATE: Feb. 7, 1986

P.O. #F000972

REPORT ON: WATER/SOIL

SAMPLE IDENTIFICATION: Submitted 12/17/85 and identified as shown below:

TESTS PERFORMED AND RESULTS:

Water Samples

1)	MCT091	March Pt. Landfill	12/11/85	M. Therien, S. Witham
2)	MCT092	March Pt. Landfill	12/11/85	M. Therien, S. Witham
3)	MCT094	March Pt. Landfill	12/11/85	M. Therien, S. Witham
4)	MCT095	March Pt. Landfill	12/11/85	M. Therien, S. Witham
5)	Transport Blank	March Pt. Landfill	12/11/85	M. Therien, S. Witham

Soil Samples

6)	MCT093	March Pt. Landfill	12/11/85	M. Therien, S. Witham
7)	MCT096	March Pt. Landfill	12/11/85	M. Therien, S. Witham

Samples were analyzed for priority pollutants in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1982, Methods 8240 (volatile organics), and 8270 (semi-volatile extractables).

WATER	parts per billion (ug/L)		
Volatile Organics (by GC/MS)	1	2	3
Chloromethane	L/1.	L/1.	L/1.
Bromomethane	L/1.	L/1.	L/1.
Vinyl Chloride	L/1.	L/1.	L/1.
Chloroethane	L/1.	L/1.	L/1.

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LABORATORY NO. 04389

WATER

Volatile Organics (by GC/MS)	parts per billion (ug/L) 1	2	3
Methylene Chloride	Trace1	Trace1	Trace1
Acrolein	L/5.	L/5.	L/5.
*Acetone	8.	Trace1	L/1.
Acrylonitrile	L/5.	L/5.	L/5.
*Carbon Disulfide	L/1.	L/1.	L/1.
1,1-Dichloroethylene	L/1.	L/1.	L/1.
1,1-Dichloroethane	L/1.	L/1.	L/1.
trans-1,2-Dichloroethylene	L/1.	L/1.	L/1.
Chloroform	L/1.	L/1.	L/1.
*2-Butanone	L/1.	L/1.	L/1.
1,2-Dichloroethane	L/1.	L/1.	L/1.
1,1,1-Trichloroethane	L/1.	L/1.	L/1.
*Vinyl Acetate	L/1.	L/1.	L/1.
Bromodichloromethane	L/1.	L/1.	L/1.
Carbon Tetrachloride	L/1.	L/1.	L/1.
1,2-Dichloropropane	L/1.	L/1.	L/1.
Trichloroethylene	L/1.	L/1.	L/1.
Benzene	L/1.	L/1.	L/1.
Chlorodibromomethane	L/1.	L/1.	L/1.
1,1,2-Trichloroethane	L/1.	L/1.	L/1.
2-Chloroethyl vinyl ether	L/1.	L/1.	L/1.
Bromoform	L/1.	L/1.	L/1.
*4-Methyl-2-pentanone	L/1.	L/1.	L/1.
*2-Hexanone	L/1.	L/1.	L/1.
1,1,2,2-Tetrachloroethane	L/1.	L/1.	L/1.
Tetrachloroethylene	L/1.	L/1.	L/1.
Toluene	L/1.	L/1.	L/1.
Chlorobenzene	L/1.	L/1.	L/1.
trans-1,3-Dichloropropene	L/1.	L/1.	L/1.
Ethylbenzene	L/1.	L/1.	L/1.
cis-1,3-Dichloropropene	L/1.	L/1.	L/1.
Styrene	L/1.	L/1.	L/1.
o-Xylene	L/1.	L/1.	L/1.

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WATER

parts per billion (ug/L)

Volatile Organics (by GC/MS)	A	5	Method Blank
Chloromethane	L/1.	L/1.	L/1.
Bromomethane	L/1.	L/1.	L/1.
Vinyl Chloride	L/1.	L/1.	L/1.
Chloroethane	L/1.	L/1.	L/1.
Methylene Chloride	Trace1	Trace1	Trace1
Acrolein	L/5.	L/5.	L/5.
*Acetone	9.	8.	Trace1
Acrylonitrile	L/5.	L/5.	L/5.
*Carbon Disulfide	L/1.	L/1.	L/1.
1,1-Dichloroethylene	L/1.	L/1.	L/1.
1,1-Dichloroethane	L/1.	L/1.	L/1.
trans-1,2-Dichloroethylene	L/1.	L/1.	L/1.
Chloroform	L/1.	L/1.	L/1.
*2-Butanone	L/1.	L/1.	L/1.
1,2-Dichloroethane	L/1.	L/1.	L/1.
1,1,1-Trichloroethane	L/1.	L/1.	L/1.
*Vinyl Acetate	L/1.	L/1.	L/1.
Bromodichloromethane	L/1.	L/1.	L/1.
Carbon Tetrachloride	L/1.	L/1.	L/1.
1,2-Dichloropropane	L/1.	L/1.	L/1.
Trichloroethylene	L/1.	L/1.	L/1.
Benzene	13.	L/1.	L/1.
Chlorodibromomethane	L/1.	L/1.	L/1.
1,1,2-Trichloroethane	L/1.	L/1.	L/1.
2-Chloroethyl vinyl ether	L/1.	L/1.	L/1.
Bromoform	L/1.	L/1.	L/1.
*4-Methyl-2-pentanone	L/1.	L/1.	L/1.
*2-Hexanone	Trace1	L/1.	L/1.
1,1,2,2-Tetrachloroethane	L/1.	L/1.	L/1.
Tetrachloroethylene	L/1.	L/1.	L/1.
Toluene	L/1.	L/1.	L/1.

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WATER — parts per billion (ug/L)

Volatile Organics (by GC/MS)	4	5	Method Blank
Chlorobenzene	Trace1	L/1.	L/1.
trans-1,3-Dichloropropene	L/1.	L/1.	L/1.
Ethylbenzene	L/1.	L/1.	L/1.
cis-1,3-Dichloropropene	L/1.	L/1.	L/1.
Styrene	L/1.	L/1.	L/1.
o-Xylene	Trace1	L/1.	L/1.

SOIL — parts per billion (ug/kg)

Sediments stream nearshore

Volatile Organics (by GC/MS)	6	7	Method Blank
Chloromethane	L/5.	L/5.	L/1.
Bromomethane	L/5.	L/5.	L/1.
Vinyl Chloride	L/5.	L/5.	L/1.
Chloroethane	L/5.	L/5.	L/1.
Methylene Chloride	601.	3200.	Trace2
Acrolein	L/25.	L/25.	L/25.
*Acetone	570.	1100.	Trace2
Acrylonitrile	L/25.	L/25.	L/25.
*Carbon Disulfide	L/5.	L/5.	L/5.
1,1-Dichloroethylene	L/5.	L/5.	L/5.
1,1-Dichloroethane	L/5.	L/5.	L/5.
trans-1,2-Dichloroethylene	L/5.	L/5.	L/5.
Chloroform	Trace	L/5.	L/5.
*2-Butanone	L/5.	L/5.	L/5.

stream Sed

~~Wetash Sed~~

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LABORATORY NO. 94339

SOIL

parts per billion (ug/kg)

Volatile Organics (by GC/MS)	Sheam Sed 5	nearshore sed. 7	Method Blank
1,2-Dichloroethane	L/5.	L/5.	L/5.
1,1,1-Trichloroethane	L/5.	L/5.	L/5.
*Vinyl Acetate	L/5.	L/5.	L/5.
Bromodichloromethane	L/5.	L/5.	L/5.
Carbon Tetrachloride	L/5.	L/5.	L/5.
1,2-Dichloropropane	L/5.	L/5.	L/5.
Trichloroethylene	Trace	L/5.	L/5.
Benzene	L/5.	L/5.	L/5.
Chlorodibromomethane	L/5.	L/5.	L/5.
1,1,2-Trichloroethane	L/5.	L/5.	L/5.
2-Chloroethyl vinyl ether	L/5.	L/5.	L/5.
Bromoform	L/5.	L/5.	L/5.
*4-Methyl-2-pentanone	L/5.	L/5.	L/5.
*2-Hexanone	L/5.	L/5.	L/5.
1,1,2,2-Tetrachloroethane	L/5.	L/5.	L/5.
Tetrachloroethylene	L/5.	L/5.	L/5.
Toluene	Trace	51.	L/5.
Chlorobenzene	L/5.	L/5.	L/5.
trans-1,3-Dichloropropene	L/5.	L/5.	L/5.
Ethylbenzene	L/5.	L/5.	L/5.
cis-1,3-Dichloropropene	L/5.	L/5.	L/5.
Styrene	L/5.	L/5.	L/5.
o-Xylene	L/5.	L/5.	L/5.

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LABORATORY NO. 94389

SOIL

parts per billion (ug/kg)

Extractables (by GC/MS)	6	7	Method Blank
N-nitrosodimethylamine	L/50.	L/50.	L/50.
Bis(2-chloroethyl)ether	L/50.	L/50.	L/50.
2-Chlorophenol	L/50.	L/50.	L/50.
Phenol	L/50.	L/50.	L/50.
1,3-Dichlorobenzene	L/50.	L/50.	L/50.
1,4-Dichlorobenzene	L/50.	L/50.	L/50.
1,2-Dichlorobenzene	L/50.	L/50.	L/50.
Bis(2-chloroisopropyl)ether	L/50.	L/50.	L/50.
Hexachloroethane	L/50.	L/50.	L/50.
N-nitroso-di-n-propylamine	L/50.	L/50.	L/50.
Nitrobenzene	L/50.	L/50.	L/50.
Isophorone	L/50.	L/50.	L/50.
2-Nitrophenol	L/50.	L/50.	L/50.
2,4-Dimethylphenol	L/50.	L/50.	L/50.
Bis(2-chloroethoxyl)methane	L/50.	L/50.	L/50.
2,4-Dichlorophenol	L/50.	L/50.	L/50.
1,2,4-Trichlorobenzene	L/50.	L/50.	L/50.
Naphthalene	L/50.	L/50.	L/50.
Hexachlorobutadiene	L/50.	L/50.	L/50.
4-Chloro-m-cresol	L/50.	L/50.	L/50.
Hexachlorocyclopentadiene	L/50.	L/50.	L/50.
2,4,6-Trichlorophenol	L/50.	L/50.	L/50.
2-Chloronaphthalene	L/50.	L/50.	L/50.
Acenaphthylene	L/50.	L/50.	L/50.
Dimethylphthalate	L/50.	L/50.	L/50.
2,6-Dinitrotoluene	L/50.	L/50.	L/50.
Acenaphthene	L/50.	L/50.	L/50.
2,4-Dinitrophenol	L/50.	L/50.	L/50.
2,4-Dinitrotoluene	L/50.	L/50.	L/50.
4-Nitrophenol	L/50.	L/50.	L/50.

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LABORATORY NO. 94389

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SOIL	parts per billion (ug/kg)		
Extractables (by GC/MS)	6	7	Method Blank
Fluorene	L/50.	L/50.	L/50.
4-Chlorophenyl phenyl ether	L/50.	L/50.	L/50.
Diethylphthalate	L/50.	L/50.	L/50.
4,6-Dinitro-o-cresol	L/50.	L/50.	L/50.
1,2-Diphenylhydrazine	L/50.	L/50.	L/50.
4-Bromophenyl phenyl ether	L/50.	L/50.	L/50.
Hexachlorobenzene	L/50.	L/50.	L/50.
Pentachlorophenol	L/50.	L/50.	L/50.
Phenanthrene	L/50.	L/50.	L/50.
Anthracene	L/50.	L/50.	L/50.
Dibutylphthalate	L/50.	L/50.	L/50.
Fluoranthene	L/50.	50.	L/50.
Pyrene	L/50.	L/50.	L/50.
Benzidine	L/50.	L/50.	L/50.
Butyl benzyl phthalate	L/50.	L/50.	L/50.
Benzo(a)anthracene	L/50.	L/50.	L/50.
Chrysene	L/50.	L/50.	L/50.
3,3'-Dichlorobenzidine	L/50.	L/50.	L/50.
Bis(2-ethylhexyl)phthalate	L/50.	69	62.
Di-n-octyl phthalate	L/50.	L/50.	660.
Benzo(b)fluoranthene	L/50.	L/50.	L/50.
Benzo(k)fluoranthene	L/50.	L/50.	L/50.
Benzo(a)pyrene	L/50.	L/50.	L/50.
Indeno(1,2,3-cd)pyrene	L/50.	L/50.	L/50.
Dibenzo(ah)anthracene	L/50.	L/50.	L/50.
Benzo(ghi)perylene	L/50	L/50.	L/50.
*Aniline	L/50.	L/50.	L/50.
*Benzoic Acid	L/50.	L/50.	L/50.
*Benzyl Alcohol	L/50.	L/50.	L/50.
*4-Chloroaniline	L/50.	L/50.	L/50.

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SOIL

parts per billion (ug/kg)

Extractables (by GC/MS)	6	7	Method Blank
*Dibenzofuran	L/50.	L/50.	L/50.
*2-Methylnaphthalene	L/50.	L/50.	L/50.
*2-Methylphenol	L/50.	L/50.	L/50.
*4-Methylphenol	L/50.	L/50.	L/50.
*2-Nitroaniline	L/50.	L/50.	L/50.
*3-Nitroaniline	L/50.	L/50.	L/50.
*4-Nitroaniline	L/50.	L/50.	L/50.
*2,4,5-Trichlorophenol	L/50.	L/50.	L/50.

Key

L/ indicates "less than"
* indicates additional compounds from the EPA's Hazardous Substances List.
Trace1 indicates an unquantifiable amount between 1-5 ug/L.
Trace2 indicates an unquantifiable amount between 5-25 ug/kg.

Respectfully submitted,
Laucks Testing Laboratories, Inc.

J. M. Owens

J.M. Owens

JMO:br

Laucks
Testing Laboratories, Inc.
940 South Harney St., Seattle, Washington 98108 (206)767-5060

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LABORATORY NO. 94389

APPENDIX A

Surrogate Recovery Quality Control Report

Listed below are surrogate (chemically similar) compounds utilized in the analysis of volatile and organic compounds. The surrogates are added to every sample prior extraction and analysis to monitor for matrix effects, purging efficiency, and sample processing errors. The control limits represent the 95% confidence interval established in our laboratory through repetitive analysis of these sample types.

WATER — parts per billion (ug/L)

Sample No.	Surrogate Compound	Spike Level	Spike Found	% Recovery	Control Limit
Method Blank	d4-1,2-Dichloroethane	50.0	52.9	106.	77-120
	d8-Toluene	50.0	49.4	98.9	86-119
	p-Bromofluorobenzene	50.0	51.3	103.	85-121
1	d4-1,2-Dichloroethane	50.0	47.9	95.8	77-120
	d8-Toluene	50.0	48.7	97.4	86-119
	p-Bromofluorobenzene	50.0	49.9	99.9	85-121
2	d4-1,2-Dichloroethane	50.0	49.0	98.0	77-120
	d8-Toluene	50.0	48.5	97.0	86-119
	p-Bromofluorobenzene	50.0	50.2	100.	85-121
3	d4-1,2-Dichloroethane	50.0	42.8	85.7	77-120
	d8-Toluene	50.0	47.9	95.9	86-119
	p-Bromofluorobenzene	50.0	52.5	105.	85-121
4	d4-1,2-Dichloroethane	50.0	48.6	97.2	77-120
	d8-Toluene	50.0	48.2	96.5	86-119
	p-Bromofluorobenzene	50.0	49.8	99.7	85-121
5	d4-1,2-Dichloroethane	50.0	49.7	99.5	77-120
	d8-Toluene	50.0	48.2	96.4	86-119
	p-Bromofluorobenzene	50.0	51.0	102.	85-121

Laucks
Testing Laboratories, Inc.
940 South Harney St., Seattle, Washington 98108 (206)767-5060

Certificate

Chemistry, Microbiology, and Technical Services

Washington State Dept. of Ecology

LABORATORY NO. 94309

APPENDIX - continued

SOIL

parts per billion (ug/kg)

Sample No.	Surrogate Compound	Spike Level	Spike Found	% Recovery	Control Limit
Method Blank	d4-1,2-Dichloroethane	50.0	50.2	100.	50-160
	d8-Toluene	50.0	50.5	101.	50-160
	p-Bromofluorobenzene	50.0	51.1	102.	50-160
6	d4-1,2-Dichloroethane	291.	254.	87.5	50-160
	d8-Toluene	291.	281.	96.6	50-160
	p-Bromofluorobenzene	291.	293.	101.	50-160
7	d4-1,2-Dichloroethane	1000.	885.	88.5	50-160
	d8-Toluene	1000.	942.	94.2	50-160
	p-Bromofluorobenzene	1000.	1040.	104.	50-160
Method Blank	2-Fluorophenol	100.	70.6	70.6	25-121
	d5-Phenol	100.	92.9	92.9	24-113
	2-Bromophenol	100.	68.8	68.8	59-97
	d5-Nitrobenzene	50.	35.3	70.5	23-120
	2-Fluorobiphenyl	50.	37.7	75.3	30-115
	d10-Azobenzene	50.	42.5	84.9	---
	2,4,6-Tribromophenol	100.	99.9	99.9	19-122
	d14-p-Terphenyl	50.	37.5	74.9	18-137

Laucks
Testing Laboratories, Inc.
940 South Harney St., Seattle, Washington 98108 (206)767-5060

Certificate

Chemistry, Microbiology, and Technical Services

Washington State Dept. of Ecology

LABORATORY NO. 94389

APPENDIX - continued

SOIL

parts per billion (ug/kg)

Sample No.	Surrogate Compound	Spike Level	Spike Found	% Recovery	Control Limit
6	2-Fluorophenol	100.	61.5	61.5	25-121
	d5-Phenol	100.	74.7	74.7	24-113
	2-Bromophenol	100.	69.8	69.8	59-97
	d5-Nitrobenzene	50.	31.3	62.6	23-120
	2-Fluorobiphenyl	50.	38.5	76.9	30-115
	d10-Azobenzene	50.	37.0	74.0	---
	2,4,6-Tribromophenol	100.	94.7	94.7	19-122
	d14-p-Terphenyl	50.	29.0	58.0	18-137
7	2-Fluorophenol	100.	55.8	55.8	25-121
	d5-Phenol	100.	63.3	63.3	24-113
	2-Bromophenol	100.	56.9	56.9	59-97
	d5-Nitrobenzene	50.	29.7	59.3	23-120
	2-Fluorobiphenyl	50.	31.7	63.3	30-115
	d10-Azobenzene	50.	34.3	68.5	---
	2,4,6-Tribromophenol	100.	73.7	73.7	19-122
	d14-p-Terphenyl	50.	25.5	51.0	18-137

APPENDIX B

APPENDIX B

EPA Site Inspection Report Form

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	D980638944

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Skagit Co. March Point Landfill	N. of Highway 20 - March Point				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Anacortes	WA	98221	Skagit	057	02

09 COORDINATES — LATITUDE: 48 27 51.0 | LONGITUDE: 122 31 45.0

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☐ B. FEDERAL _____ ☒ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
12 / 12 / 85 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1950's (BEGINNING YEAR) 1973 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☒ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Suzanne Milham	Environmentalist	Ecology	(206) 459-6319
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Ned Therien	Environmentalist	Ecology	( ) N/A
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Ken Willis	Inspector	Mt. Vernon, 2nd & Kinkaid	(206) 336-9400
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	11:00 a - 5:00 p	Sunny 35° F Clear

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency Organization)	03 TELEPHONE NO.
Suzanne E. Milham	Washington Ecology	(206) 459-6319

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Suzanne E. Milham	Ecology	WA State	(206) 459-6319	3 / 26 / 86 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	D980638944

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] D. OTHER (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

- TONS: Unknown
- CUBIC YARDS: Unknown
- NO. OF DRUMS: Unknown

03 WASTE CHARACTERISTICS (Check all that apply)

- [ ] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [ ] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			Environmental release data from
OLW	OILY WASTE			12/12/85 inspection showed slight
SOL	SOLVENTS			offshore sediment contamination
PSD	PESTICIDES			with Toluene 5/ppb and Flouran-
OCC	OTHER ORGANIC CHEMICALS			thene 50 ppb. It is unknown if
IOC	INORGANIC CHEMICALS			this contamination came from the
ACD	ACIDS			landfill or another source.
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site Inspection by Ecology 12/12/86.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	D980638944

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [X] J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None known or suspected

01 [X] K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

None known or suspected

01 [X] L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None known or suspected

01 [X] M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Surfacing leachate on East side of landfill was sampled and did not contain hazardous waste.

01 [X] N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None known or suspected

01 [X] O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No sewers in area.

01 [X] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

This site was a nonconforming, unregulated public dump.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

Ecology sampling on 12/12/85 showed only slight contamination of offshore sediment. This could not be directly related to the landfill since it was not found in leachate.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 0

IV. COMMENTS

There appears from 12/12/85 sampling results to be little if any potential hazardous waste problems associated with the future of this landfill.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Ecology 12/12/85 Site Inspection
1984 Preliminary Assessment USEPA

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	D980638944

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

Groundwater samples taken during a 12/12/85 Site Inspection by Ecology showed no contamination in groundwater samples. Groundwater is shallow <10 feet. There are no drinking water wells downgradient from the site.

01 [X] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ — 04 NARRATIVE DESCRIPTION

A small stream runs along the SW side of the landfill. No contamination attributed to the landfill was detected there during 12/12/85 Ecology Inspection. Offshore Padilla Bay water samples showed no contamination.

01 [X] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

None known or suspected.

01 [X] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No known certified fire/explosion threat.

01 [X] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Site is now covered. Leachate is surfacing but was shown not to contain hazardous materials by Ecology 12/12/85 sampling.

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE _____) [ ] POTENTIAL [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: 20 (Acres) — 04 NARRATIVE DESCRIPTION

The landfill is approximately 20 acres in size. Offshore sediment samples showed slight contamination with toluene, and flouranthene. These are not directly attributable to the landfill.

01 [ ] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

None known or suspected. Nearest well is 2500 ft. upgradient to the south and is owned by USGS. Two Skagit County PUD secondary wells are within a mile west and upgradient.

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

None reported or suspected

01 [X] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None known or suspected.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	D980638944

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL	Unknown	
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

☐ A. BUILDINGS ON SITE

None

06 AREA OF SITE

20 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

There is a dike along the eastside of the landfill and Padilla Bay. This dike does not prevent leachate from reaching the bay.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Leachate is draining into Padilla Bay. No hazardous waste was detected in this.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Ecology 12/12/85 Site Inspection Report.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	D980638944

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ☐	A. ☐	B. ☐	C. ☐	A. _____ (mi)
NON-COMMUNITY	C. ☐	D. ☒	D. ☐	E. ☐	F. ☒	B. 1 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☒ B. DRINKING (Other sources available); COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER	03 DISTANCE TO NEAREST DRINKING WATER WELL
10,000	1 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
(10)(60) (ft)	East	65 (ft)	Unknown (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)
USGS well 2500 feet to the South upgradient. Two secondary PUD wells 1 mile upgradient to the West. Wells are 65-80 feet deep and are upgradient from the landfill.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☒ NO	COMMENTS: landfill drains to saltwater	☒ YES ☐ NO	COMMENTS: Landfill is on Padilla Bay

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION, DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☒ D. NOT CURRENTLY USED

02 AFFECTED POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Padilla Bay	☒	0 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 200 NO. OF PERSONS	B. 6,000 NO. OF PERSONS	C. 10,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: _____ (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
	(mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
This site is located in an industrialized, rural area. The Swinomish indian reservation is to the South. There are approximately 10,000 people within 3 miles including workers. The area is not densly populated with permanent residences.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: WA | 02 SITE NUMBER: D980638944

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
>100 (ft)	40 approx. (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
27 (in)	2 (in)	1 %	East	25 %

09 FLOOD POTENTIAL

SITE IS IN - YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum) — Padilla Bay

ESTUARINE	OTHER
A. 0 (mi)	B. (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

0 (mi)

ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. 1/8 (mi)	B. 0 (mi)	C. 5 (mi)	D. 5 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

This landfill is in a filled-in area of the Padilla Bay Shoreline. Padilla Bay is off of March Point which is on Fidalgo Island. Fidalgo Island and Padilla Bay are in Puget Sound. The landfill is located in a highly industrialized rural area with Texaco and Shell refineries and Allied Chemical Companies being within 3/4 of a mile. The landfill is at the base of a bluff and adjacent to highway 20 on the west side. The Swinomish indian reservation is to the south across Highway 20 from the landfill.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site Inspection, Ecology 12/12/85
USEPA, 1984 Preliminary Assessment

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	D980638944

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	1	Laucks and Manchester Environmental Lab	2/86
SURFACE WATER	2		
WASTE	0		
AIR			
RUNOFF			
SPILL			
SOIL	2		
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
	None

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☐ GROUND ☐ AERIAL

02 IN CUSTODY OF EPA and Ecology
(Name of organization or individual)

03 MAPS
☒ YES
☐ NO

04 LOCATION OF MAPS Ecology

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Observations were noted in a field notebook.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Ecology Site Inspection 12/12/85 and REport 3/86.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	D980638944

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
WA Dept. of Natural Resources	WAD980638944	Sixth Avenue		Olympia,	WA	98504

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA 1984 Preliminary Assessment

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	D980638944

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER	04 SIC CODE
Same as Owner		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER	

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER	13 SIC CODE
12 STREET ADDRESS (P.O. Box, RFD #, etc.)		
14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD	

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER	13 SIC CODE
12 STREET ADDRESS (P.O. Box, RFD #, etc.)		
14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD	

10 NAME	11 D+B NUMBER	13 SIC CODE
12 STREET ADDRESS (P.O. Box, RFD #, etc.)		
14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD	

10 NAME	11 D+B NUMBER	13 SIC CODE
12 STREET ADDRESS (P.O. Box, RFD #, etc.)		
14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	D980638944

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
None	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: WA | 02 SITE NUMBER: D980638944

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X B. TEMPORARY WATER SUPPLY PROVIDED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X C. PERMANENT WATER SUPPLY PROVIDED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X D. SPILLED MATERIAL REMOVED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X E. CONTAMINATED SOIL REMOVED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X F. WASTE REPACKAGED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X G. WASTE DISPOSED ELSEWHERE | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X H. ON SITE BURIAL | 02 DATE | 03 AGENCY Public Works
04 DESCRIPTION
Site was a municipal landfill 1950-1973

01 X I. IN SITU CHEMICAL TREATMENT | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X J. IN SITU BIOLOGICAL TREATMENT | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X K. IN SITU PHYSICAL TREATMENT | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X L. ENCAPSULATION | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X M. EMERGENCY WASTE TREATMENT | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X N. CUTOFF WALLS | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X O. EMERGENCY DIKING/SURFACE WATER DIVERSION | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X P. CUTOFF TRENCHES/SUMP | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X Q. SUBSURFACE CUTOFF WALL | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: WA | 02 SITE NUMBER: D980638944

II PAST RESPONSE ACTIVITIES (Continued)

01 X R. BARRIER WALLS CONSTRUCTED | 02 DATE | 03 AGENCY
04 DESCRIPTION
A dike was constructed in 1973.

01 X S. CAPPING/COVERING | 02 DATE | 03 AGENCY
04 DESCRIPTION
Three feet of soil has been used to cover the landfill.

01 X T. BULK TANKAGE REPAIRED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X U. GROUT CURTAIN CONSTRUCTED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X V. BOTTOM SEALED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X W. GAS CONTROL | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X X. FIRE CONTROL | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X Y. LEACHATE TREATMENT | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X Z. AREA EVACUATED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X 1. ACCESS TO SITE RESTRICTED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X 2. POPULATION RELOCATED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No

01 X 3. OTHER REMEDIAL ACTIVITIES | 02 DATE | 03 AGENCY
04 DESCRIPTION
No remedial activities have taken place at this site. Ecology site inspection sampling showed no need for remedial actions.

III. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)
Ecology Site Inspection 12/12/85.
EPA Preliminary Assessment, 1984.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	980638944

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

There has been no enforcement action taken at this site. This landfill was closed in 1973 by the Public Works Department in Anacortes.

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

Preliminary Assessment, 1984, EPA
Ecology NWRO Files

EPA FORM 2070-13 (7-81)

APPENDIX C

APPENDIX C

Photographic Documentation

All photographs were taken by Suzanne Milham on December 12, 1985, during the Ecology site inspection at the March Point Landfill, Anacortes Washington. A Cannon Sureshot camera using ASA 100, 35 mm film with automatic focus and light settings was used.

Ned Therien is shown here with the bailer used to collect sample NCT091. The surroundings of NW Concrete Company's barrow pit can be seen in the backgroundl The gravel and sand soils can also be seen in this photograph.

Sample NCT091: N.W. Concrete Barrow pit, filled with groundwater. Across the street from the landfill and upgradient. The surface of the water was frozen and the samples were bailed from between the cracks in the ice.

NCT092 and NCT093: Samples were taken of water and sediment at the SW edge of the landfill from an estuarial stream which flows to Padilla Bay. The surface of the water was frozen over with 1 inch of ice.

Sample NCT094: was taken of water 3 feet off shore on the East side of the landfill off of the rock dike. Sample was collected by bailing the water. There was a visible oily sheen present on the water.

Sample NCT096 was taken of the marine sediments immediately off shore from the landfill on the east side in Padilla Bay. There was an apparent rust color to the top 2-3 inches of sediment. This sample was collected using a stainless steel trier.

Sample NCT095 was taken of the leachate/seepage which was flowing from the landfill through the dike into Padilla Bay. This sample was taken from the East side of the landfill close to where sample NCT094 was collected.

APPENDIX D

APPENDIX D

Site Sampling Plan

SKAGIT COUNTY - MARCH POINT LANDFILL
ANACORTES, WASHINGTON

SITE INVESTIGATION SAMPLING PLAN

NOVEMBER 1985

Prepared by

Suzanne E. Milham
Washington State Department of Ecology

Site Sampling Plan Summary

Site: Skagit County - March Point Landfill
North of Highway 20 - March Point
Anacortes, WA 98221

NE 1/4, Section 3, T34N, R2E, WM

Proposed Date of Investigation: _____

Preparer: Suzanne E. Milham

Reviewed by: _____
Project Officer, EPA Date

_____
Site Inspection Team Leader Date

_____
Site Inspection Team Member Date
Health and Safety Coordinator

I. INTRODUCTION

The purpose of this plan is to detail the program of site investigation sampling activities to be carried out by the Ecology PA/SI team at the Skagit County - March Point Landfill.

II. SITE DESCRIPTION AND WASTE CHARACTERISTICS

This site is an old landfill located in the tidelands owned by the Washington Department of Natural Resources. This site was used since 1950 as a public dump. It is unknown what waste types or quantities other than municipal wastes were disposed of. Four major chemical industries are located on March Point near the landfill and have been in business as long as the fill has been there. Leachate has been documented and is surfacing from the landfill.

III. OBJECTIVES

Samples of leachate, soil, and possibly groundwater will be taken to determine if contamination is present.

IV. SAMPLE COLLECTION/ANALYSIS PARAMETERS

Two water samples will be taken in the gravel pit to the west of the site and in the ditch on the southwest side of the fill. A third water sample will be taken from an upgradient, background well if available.

Three soil samples will be taken, one in the marshy area downgradient in the fill, one from the center of the fill, and one in an upgradient area representative of background.

Samples will be analyzed for heavy metals, chlorinated hydrocarbons, volatile organics and phenolics.

Sample splits will be made available to the Department of Natural Resources if requested.

Equipment List

EQUIPMENT	USE
Sample Containers	Appropriate to analyses desired (see Table)
Sample Preservatives	See Table
Field Blanks	See Table
Keys	For locked monitoring wells.
Pipe wrenches	May be necessary to remove steel security cap on wells which have not been recently opened and sampled.

EQUIPMENT	USE
Tape measure	Use to measure diameter of well casing above ground level.
Electronic water level indicator/ graduated depth sounder	Used to determine static water level and total depth of well.
Pocket Calculator	Use for static water volume calculations.
Pump	Use to purge or evacuate well prior to obtaining sample; it is not a recommended means to obtain a sample.
Sampling Trier	Collect soil samples at depths of up to several feet below surface.
Stainless Steel Mixing Bowl	Composite soil samples.
Stainless Steel Spoons	Soil sample collection.
Teflon Well Bailer	A bailer is a device which is lowered into a well to obtain water samples.
Monofilament Line	Use for lowering bailer into well; should be of sufficient strength to hold full bailer and overcome any resistance between well casing and bailer. The use of any other type of line is not recommended. Steel wire might be an appropriate substitute but can cause handling problems for personnel wearing gloves.
Decontamination solutions/water (Methanol)	Use for decontaminating sampling equipment, bailer, and water level indicator between samples.
Plastic pails, graduated	Use for measuring volume of water taken from well prior to sampling.
Thermometer	Use to measure temperature of groundwater.
Field logbook	Used to record field observations.
Camera/film Sample tags Chain-of-custody records Receipt for sample forms Waterproof ink pen Compass	Use to document sampling procedure.
pH Meters - soil and water	Determine pH of samples

Department of Ecology
Chain of Custody Procedures

Background

These procedures were adopted for use by the Department of Ecology from those used by the EPA Region X Surveillance and Analysis Division. A documented record of sample handling is necessary for special studies involving compliance monitoring or other enforcement-related activities in which the data may be used in litigation. The evidence-gathering portion of a survey is characterized by the minimum number of samples required to give a fair representation of the effluent, or water body, air shed, or other media, from which they are taken.

The procedures described in this section represent the optimum method. The failure in any particular instance to follow one or more steps does not necessarily render evidence either inadmissible or unusable. Consequently, there should be no hesitancy to mention any deviation in procedure in any given case.

Definition of Custody

Chain of custody procedures are followed to establish sample possession from the time it is taken until the results are introduced as evidence into court. A sample is in your "custody" when:

1. It is in your actual physical possession.

2. It is in your view, after being in your physical possession.

3. It was secure beyond a reasonable doubt if not in your view.

Sample Collection

1. As few people as possible should handle the sample.

2. Preprinted sample tags are filled out in waterproof ink and attached to the sample container at the time the complete sample is collected. The tags contain, as a minimum, the following information: station identification, station location, date-time-type of sample (grab or composite), and initials of the sample collector and any observing witness. It is desirable that witnesses be present.

3. Blank samples, using distilled water with preservatives added, may be prepared at the time of sample collection and later analyzed to establish the lack of container or preservative contamination.

4. Bound Field Data Record logbooks with numbered pages are used to record field measurements and other pertinent information. These notes may be used to refresh the sampler collector's memory in the event he later takes the stand to testify regarding his actions during the evidence-gathering activity. Data entered in the logbooks are recorded with ballpoint pen or waterproof ink. Each page is signed by the sample collector and any available witnesses. Any errata in making entries should be lined out with a single line and then initialed.

5. The sample collector is responsible for the care and custody of the samples until properly dispatched to the receiving laboratory or turned over to an assigned custodian. The sample collector must assure that each container is in his physical possession or in his view at all times, or locked or sealed in such a place and manner that no one can tamper with it.

6. If colored slides, photographs, or other related evidence are obtained to show the impact of the pollutant or substantiate any other conclusions of the investigation, the following documentation is required on the back of each photo or in the Field Data Record Logbook: time, date, location of the photographer when taking the photo, film type, and the signature of the photographer and any witnesses.

Transfer of Custody and Shipment

1. Samples are accompanied by a chain of custody record which includes the name of the survey, sample collector's signature, number, and description of the samples. When turning over the possession of a part or all of the samples to a field analysis station or to a laboratory, the transferer and transferee will sign and record the time and date on the sheet.

2. All packages are accompanied by the sample custody record showing identification of the contents. The original accompanies the shipment, and a copy is retained by the survey coordinator. The chain of custody record is signed by the sample collector along with recording the date and time. It is then placed inside the shipping container.

3. Samples are carefully packed for shipment in suitable containers to avoid damage. The shipping containers are locked for shipment, or sealed in such a manner that the container cannot be opened without breaking the seal. This lock or seal is not removed until the shipping container is opened by the laboratory custodian or one of his alternates.

4. If sent by mail, the package is sent via Registered Mail with Return Receipt Requested. If sent by common carrier, all shipping receipts are retained as part of the permanent chain of custody documentation.

Laboratory Custody Procedures

1. Couriers picking up samples at the bus depot, post office, etc., sign and retain the shipping documents to acknowledge receipt of the samples.

2. All incoming samples are received only by the laboratory sample custodian or one of his alternates who indicate receipt by signing the chain of custody record accompanying the samples and retaining it as part of the permanent record. Samples are then logged into the laboratory and assigned a laboratory number.

3. The sample custodian or one of his alternates is responsible for the security of the samples in the laboratory. Samples are stored in locked or sealed refrigerators or cabinets with the keys to the locks held by the sample custodian or one of his alternates.

Field Measurements and Observations

The following field measurements and observations will be logged:

1) Measure the diameter of the well casings.

2) Note the casing materials (i.e., pvc, steel, etc.).

3) Available well log information noted.

4) Weather conditions, air temperature, sky conditions, etc.

5) Physical observable characteristics of water.

6) Observations about well characteristics.

7) Temperature of water before and after purging.

Groundwater Sampling Procedures

A clean Teflon bailer will be used to obtain water to fill sample containers. This bailer will be lowered into the well on a mono-filament nylon line. Care will be taken to avoid agitation, which may promote the loss of volatile constituents from the samples.

Soil Sampling Procedures

Surface soil will be removed with a shovel to a depth of 24". Soil samples will be collected with a specially cleaned stainless steel sampling trier, trowel or spoon at this level. Soil samples will be composited in pairs by mixing in a stainless steel bowl.

Decontamination Procedures for Sampling Equipment

After equipment such as the bailer is used for sampling, it will be decontaminated before being used to sample another location. This will prevent cross contamination.

Equipment will first be washed with soap and water solution; then rinsed with clean water.

After this, equipment will be rinsed with methanol and water mixture and then triple rinsed with deionized water and let to air dry.

4. Only the sample custodian or his alternates distribute samples to laboratory personnel who are to perform analyses. Laboratory personnel record in their laboratory notebook or analytical worksheet information describing t sample, the procedures performed and the results of the analyses. The notes shall be retained as a permanent record in the laboratory and should note any abnormalities or other significant observations about the samples or analyses.

5. Laboratory personnel are responsible for the care and custody of the sample once it is distributed by the sample custodian.

6. Once the sample analyses are completed, the unused portion of the samples, together with all identifying tags and laboratory records, are returned to the sample custodian. The returned tagged sample is retained in locked or sealed cabinets or refrigerators until it is required for trial.

7. Analytical results are checked and initialed by senior laboratory personnel. The original lab bench sheets are stored in the laboratory files.

8. Samples and tags are discarded only upon the order of the Laboratory Director, after conferring with appropriate personnel in the Enforcement Division or the Assistant Attorney General handling the case to make certain that these items are no longer needed.

APPENDIX E

APPENDIX E

Site Safety Plan

MARCH POINT LANDFILL
ANACORTES, WASHINGTON

SITE SAFETY AND HEALTH PLAN

SEPTEMBER 1985

Prepared by

Suzanne E. Milham
Washington State Department of Ecology

Site Safety Plan Summary

Site: Skagit County March Point Landfill
North of Highway 20 March Point
Anacortes, WA 98221

NE 1/4 Sec 3, T34N, R 2E WM

Preparer: Suzanne E. Milham

Reviewed by: _____
Project Officer, EPA Date

_____
Site Inspection Team Leader Date

_____
Site Inspection Team Member Date

Type of Facility: This facility is an old landfill which may have received chemical wastes from nearby TEXACO, Shell, Allied Chemical, and NW Petrochemical Company.

Size of Area: Approximately 20 acres.

Land Use in Surrounding Area: This site is located in a rural area with industrial development to the north and west. These industries have been in business as long as the landfill has been in existence. The landfill is located in the tidelands at the bottom of a bluff. The Swinomish Indian Reservation is to the south across Highway 20.

Hazard Type: Direct contact, possible respiratory.

Waste Type: It is unknown what waste types or quantities other than municipal wastes. Four major chemical industries are located on March Point, west and north of the site. Texaco is known to have dumped unknown substances at this landfill.

Identified Wastes: Unknown: suspect industrial chemicals.

Factors Promoting Action: This inspection is being carried out under the Multi-Site Cooperative Agreement, Preliminary Assessment/Site Investigation program. This investigation will attempt to identify the presence, location and spread of hazardous materials at this site.

Sampling Plan: Two leachate, 2 groundwater and 2 soil samples will be taken. These samples will be analyzed for VOAs, phenolics, heavy metals, chlorinated hydrocarbons, and acid base neutrals.

Levels of Protection: Level D, Level C, if necessary. Professional judgment will be used in determining the adequacy of these protection levels.

Personnel: Inspection Coordinator: Ned Therien
WDOE Team Member: Suzanne Milham, Site Safety Coordinator
EPA Project Officer: Bob Kievit

Personnel Training: The inspection team leader and site safety coordinator have had formal EPA site inspection training as well as emergency first aid and CPR. WDOE site investigation team members are participants in the medical monitoring program.

Emergency Facilities and Telephone Numbers

Nearest Telephone: _____

Emergency Telephone 911

Police, Fire, Ambulance

Hospital:

St. Luke's General Hospital
809 Chestnut Street
Bellingham, WA 98225

734-8300
or
354-5931

Site Description/History of Activities

This site is an old landfill located in tidelands owned by the Washington State Department of Natural Resources. This site has been used as a public dump since the 1950's and was operated by Skagit County public works department from 1961-73 when it was closed and covered. The site has naturally revegitated and leachate is surfacing, particularly on the eastern boundary.

The Shell and Texaco refineries, Allied Chemical sulfuric acid plant and Northwest Petrochemical are west and north of the site. These industries have operated for 30-40 years at these locations. It is considered highly likely that these industries took wastes to this fill because it was the largest and closest county dump when in operation.

Hazardous Substances Suspected On-Site/Assessment

Surface leachate indicates inadequate containment of waste materials. It is suspected that industrial wastes were buried at this site. Sampling activities will include down and upgradient wells and soil core collection.

Equipment Lists

I. Level D

- Tyvek coveralls or rain suits
- Neoprene steel toe and shank boots
- Chemical resistant gloves - "Solvex"
- Safety goggles - if necessary
- Hard hat
- Latex inner glove liners

II. Level C

- Air purifying full face respirator (MSHA - NIOSH approved)
- Tyvek (Saranex if raining) coveralls
- Gloves (inner), latex chemical resistant
- Gloves (outer), chemical resistant- "Solvex"
- Boots, chemical resistant steel toe and shank
- Hard Hat
- Duct tape

Decontamination Procedures

I. Level D Decontamination

If soiled, Tyvek coveralls, and gloves will be placed in plastic bags and removed from the site for disposal. Boots will be washed with detergent and rinsed before leaving the site. If rain suits instead of Tyvek coveralls are used, soil will be rinsed off while they are still being worn and before the boots are washed.

II. Level C Decontamination

Station 1: Contaminated Equipment Drop

Equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) will be separated and deposited on plastic drop cloths. Each will be contaminated to a different degree. Segregation at the drop reduces the probability of cross-contamination.

Station 2: Boot and Glove Wash

Scrub boots and gloves with detergent/water solution.

Equipment: container (20-30 gallons)
detergent water
2-3 long-handle, soft-bristle scrub brushes

Station 3: Boot and Glove Rinse

Rinse off detergent solution from Station 2 using copious amounts of water. Repeat as necessary.

Equipment: container (30-50 gallons)
or
pressure spray unit
water
2-3 long-handle, soft-bristle scrub brushes

Station 4: Tape Removal

Remove tape around boots and gloves and deposit in plastic bag or container with plastic liner.

Equipment: plastic bag
or
container (20-30 gallons)
plastic liners

Station 5: Boot Removal

Remove boots, step onto clean dry plastic sheeting.

Station 6: Outer Glove Removal

Remove outer gloves and deposit in plastic bag or container with plastic liner.

Equipment: plastic bag
or
container (20-30 gallons)
plastic liners

Station 7: Coverall Removal

Remove coveralls and deposit in plastic bag or container with plastic liner.

Equipment: plastic bag
or
container (20-30 gallons)
plastic liners

Station 8: Facepiece Respirator Removal

Remove facepiece. Avoid touching face with gloves. Deposit facepiece in individual plastic bags. Decontaminate off of the site.

Equipment: plastic bags

Station 9: Inner Glove Removal

Remove inner gloves and deposit in a plastic bag or a container with plastic liner.

Equipment: plastic bag
or
container (20-30 gallons)
plastic liners

MARCH POINT LANDFILL
ANACORTES, WASHINGTON

SITE SAFETY AND HEALTH PLAN

SEPTEMBER 1985

Prepared by

Suzanne E. Milham
Washington State Department of Ecology

Site Safety Plan Summary

Site: Skagit County March Point Landfill
North of Highway 20 March Point
Anacortes, WA 98221

NE 1/4 Sec 3, T34N, R 2E WM

Preparer: Suzanne E. Milham

Reviewed by: _____
Project Officer, EPA Date

_____
Site Inspection Team Leader Date

_____
Site Inspection Team Member Date

Type of Facility: This facility is an old landfill which may have received chemical wastes from nearby TEXACO, Shell, Allied Chemical, and NW Petrochemical Company.

Size of Area: Approximately 20 acres.

Land Use in Surrounding Area: This site is located in a rural area with industrial development to the north and west. These industries have been in business as long as the landfill has been in existence. The landfill is located in the tidelands at the bottom of a bluff. The Swinomish Indian Reservation is to the south across Highway 20.

Hazard Type: Direct contact, possible respiratory.

Waste Type: It is unknown what waste types or quantities other than municipal wastes. Four major chemical industries are located on March Point, west and north of the site. Texaco is known to have dumped unknown substances at this landfill.

Identified Wastes: Unknown: suspect industrial chemicals.

Factors Promoting Action: This inspection is being carried out under the Multi-Site Cooperative Agreement, Preliminary Assessment/Site Investigation program. This investigation will attempt to identify the presence, location and spread of hazardous materials at this site.

Sampling Plan: Two leachate, 2 groundwater and 2 soil samples will be taken. These samples will be analyzed for VOAs, phenolics, heavy metals, chlorinated hydrocarbons, and acid base neutrals.

Levels of Protection: Level D, Level C, if necessary. Professional judgment will be used in determining the adequacy of these protection levels.

Personnel: Inspection Coordinator: Ned Therien
WDOE Team Member: Suzanne Milham, Site Safety Coordinator
EPA Project Officer: Bob Kievit

Personnel Training: The inspection team leader and site safety coordinator have had formal EPA site inspection training as well as emergency first aid and CPR. WDOE site investigation team members are participants in the medical monitoring program.

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Bellingham, WA 98225

734-8300
or
354-5931

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The Shell and Texaco refineries, Allied Chemical sulfuric acid plant and Northwest Petrochemical are west and north of the site. These industries have operated for 30-40 years at these locations. It is considered highly likely that these industries took wastes to this fill because it was the largest and closest county dump when in operation.

Hazardous Substances Suspected On-Site/Assessment

Surface leachate indicates inadequate containment of waste materials. It is suspected that industrial wastes were buried at this site. Sampling activities will include down and upgradient wells and soil core collection.

Equipment Lists

I. Level D

- Tyvek coveralls or rain suits
- Neoprene steel toe and shank boots
- Chemical resistant gloves - "Solvex"
- Safety goggles - if necessary
- Hard hat
- Latex inner glove liners

II. Level C

- Air purifying full face respirator (MSHA - NIOSH approved)
- Tyvek (Saranex if raining) coveralls
- Gloves (inner), latex chemical resistant
- Gloves (outer), chemical resistant- "Solvex"
- Boots, chemical resistant steel toe and shank
- Hard Hat
- Duct tape

Decontamination Procedures

I. Level D Decontamination

If soiled, Tyvek coveralls, and gloves will be placed in plastic bags and removed from the site for disposal. Boots will be washed with detergent and rinsed before leaving the site. If rain suits instead of Tyvek coveralls are used, soil will be rinsed off while they are still being worn and before the boots are washed.

II. Level C Decontamination

Station 1: Contaminated Equipment Drop

Equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) will be separated and deposited on plastic drop cloths. Each will be contaminated to a different degree. Segregation at the drop reduces the probability of cross-contamination.

Station 2: Boot and Glove Wash

Scrub boots and gloves with detergent/water solution.

Equipment: container (20-30 gallons)
detergent water
2-3 long-handle, soft-bristle scrub brushes

Station 3: Boot and Glove Rinse

Rinse off detergent solution from Station 2 using copious amounts of water. Repeat as necessary.

Equipment: container (30-50 gallons)
or
pressure spray unit
water
2-3 long-handle, soft-bristle scrub brushes

Station 4: Tape Removal

Remove tape around boots and gloves and deposit in plastic bag or container with plastic liner.

Equipment: plastic bag
or
container (20-30 gallons)
plastic liners

Station 5: Boot Removal

Remove boots, step onto clean dry plastic sheeting.

Station 6: Outer Glove Removal

Remove outer gloves and deposit in plastic bag or container with plastic liner.

Equipment: plastic bag
or
container (20-30 gallons)
plastic liners

Station 7: Coverall Removal

Remove coveralls and deposit in plastic bag or container with plastic liner.

Equipment: plastic bag
or
container (20-30 gallons)
plastic liners

Station 8: Facepiece Respirator Removal

Remove facepiece. Avoid touching face with gloves. Deposit facepiece in individual plastic bags. Decontaminate off of the site.

Equipment: plastic bags

Station 9: Inner Glove Removal

Remove inner gloves and deposit in a plastic bag or a container with plastic liner.

Equipment: plastic bag
or
container (20-30 gallons)
plastic liners